



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,967	02/02/2006	Gerhard Wolf	285132US0PCT	9432

22850 7590 11/20/2009
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

AHVAZI, BIJAN

ART UNIT	PAPER NUMBER
----------	--------------

1796

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

11/20/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No. 10/566,967	Applicant(s) WOLF ET AL.	
	Examiner BIJAN AHVAZI	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13, 14, 16, 18, 20 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13, 14, 16, 18, 20 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1796

DETAILED ACTION

1. This action is responsive to the amendment filed on August 20, 2009.
2. Claims 13-14, 16, 18, 20, 22, 24, 26 are pending. Claims 1-12 are previously cancelled.
3. Applicant's request for reconsideration of the rejection of claims in the last Office action is not persuasive and, therefore, all the claims stand rejected in view of the Applicants' amendment.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 13, 14 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt *et al.* (Pat. No. US 4,775,385) in view of Kuwabara *et al.* (Pat. No. US 5,676,707).

Regarding claims 13, 14 and 24, Schmidt *et al.* teach a process for dyeing leathers, comprising treating the leather with a polyamide-amine (water-soluble cationic polymers) (Col. 6, line 50-52), follow by addition of anionic leather treatment composition (Col. 8, lines 18-30) in a rotating tanning drum at a uniform rate (Col. 8, line 25), wherein after tumbling, 7% of commercially available fat-liquoring mixture is added as shown in Example 6 (Col. 8, lines 25-27). Thereafter the dyed leather is dried in air, was mechanically finished (Col. 8, lines 30-31).

Art Unit: 1796

Schmidt *et al.* do not expressly teach applying the composition to leather by roll coating and/or roll application and/or spray application.

However, Kuwabara *et al.* teach applying water-soluble resin materials onto the leather by various methods such as a method in which any of the materials formed into an aqueous solution is sprayed by means of a spray gun, coated by means of a bar coater, a roll coater an applicator, a doctor blade or the like, or applied by screen printing, and a method in which any of the materials formed into a film is contact bonded (Col. 5, lines 54-61). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the process for dyeing leathers by Schmidt *et al.* so as to include applying the composition materials onto the leather by various methods as taught by Kuwabara *et al.* with reasonable expectation that would result in providing decrease in viscosity or in surface tension of soluble resin to achieve easier penetration and further to produce a uniform piece of leather (i.e. retanning) for improvements to the fullness of the leather, the tightness and smoothness of the grain, the break, the levelness and intensity of the dye shade, better uniformity in temper or flexibility, better wettability and additional stability against water and perspiration as taught by Kuwabara *et al.* (Co. 1, lines 30-37)

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided a process for dyeing leathers by Schmidt *et al.* with applying the composition materials onto the leather by various methods as taught by Kuwabara *et al.* in order to provide decrease in viscosity or in surface tension of soluble resin to achieve easier penetration and further to produce a uniform piece of leather (i.e. retanning) for improvements to the fullness of the leather, the tightness and smoothness of the grain, the break, the levelness and intensity of the dye shade, better uniformity in temper or flexibility, better wettability and additional stability against water and perspiration.

Art Unit: 1796

6. Claims 16 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt *et al.* (Pat. No. US 4,775,385) in view of Kuwabara *et al.* (Pat. No. US 5,676,707) as applied to claims 13, 14 and 24 above, and further in view of Buckman *et al.* (Pat. No. US 4,054,542).

Regarding claim 16, Schmidt *et al.* and Kuwabara *et al.* discussed all the features as above. Schmidt *et al.* and Kuwabara *et al.* do not expressly teach wherein the cationic or amphoteric aqueous treatment composition used in process step (a) is an epichlorohydrinamine polymer.

However, Buckman *et al.* teach cationic, water-soluble, amine-epichlorohydrin polymer compositions and to the uses of these polymers in the pulp and paper industry to improve drainage, provide retention of fiber fines, dyes, pigments, fillers, starch, and gum and increase strength. In addition, said polymers are useful as resins in the manufacture of electroconductive paper and the sizing of paper and paperboard as well as the separation of minerals in ore processing operations (Col. 1, lines 7-12), wherein the reaction products involving polymeric precursor and mono-tertiary amines may be as low as 500 whereas the polymers made with di-tertiary amines may have molecular weights as high as 50,000 to 500,000 (Col. 5, lines 42-46). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the process for dyeing leathers by Schmidt *et al.* in view of applying the composition materials onto the leather by various methods by Kuwabara *et al.* so as to include epichlorohydrinamine polymer as taught by Buckman *et al.* with reasonable expectation that would result in manufacturing various molecular weight ranges polymer by the selection of different catalysts and the use of cross-linking reagents and further to provide novel cationic water-soluble, amine-epichlorohydrin polymers as compare to

Art Unit: 1796

polyethylenimines which requires the use of the very toxic monomer ethylenimine which, in recent years, has been described as a carcinogen, and severe restrictions have been placed on the handling of the monomer in commercial and industrial plants by government regulatory agencies as taught by Buckman *et al.* (Col. 1, lines 40-46).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided a process for dyeing leathers by Schmidt *et al.* in view of applying the composition materials onto the leather by various methods by Kuwabara *et al.* with epichlorohydrinamine polymer as taught by Buckman *et al.* in order to manufacture various molecular weight ranges polymer by the selection of different catalysts and the use of cross-linking reagents and further to provide novel cationic water-soluble, amine-epichlorohydrin polymers as compare to polyethylenimines which requires the use of the very toxic monomer ethylenimine which, in recent years, has been described as a carcinogen, and severe restrictions have been placed on the handling of the monomer in commercial and industrial plants by government regulatory agencies.

Regarding claim 22, Buckman *et al.* teach the primary amines which have been found to be satisfactory for the reaction with epichlorohydrin to form the polymeric precursor include aliphatic, alicyclic, and alkylaromatic amines which may be substituted by hydroxyl or chloro groups or contain carbon to carbon double bonds. The aliphatic groups in these amines may be straight or branched chains (Col. 4, lines 38-44). Examples of these amines are given such as isopropylamine (Col. 4, line 56-63). It is held to be a ***prima facie*** case of obviousness since a person of ordinary skill in the art would have recognized the interchangeability of the element (i.e. functional group) shown in the prior art as taught by Buckman *et al.* (Col. 4, line 56-63)

Art Unit: 1796

for the corresponding element disclosed in the specification wherein the side chains syntheses merely done by routine experimentation.

7. Claims 18, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt *et al.* (Pat. No. US 4,775,385) in view of Kuwabara *et al.* (Pat. No. US 5,676,707) as applied to claims 13, 14 and 24 above, and further in view of Ohno *et al.* (Pat. No. US 6,809,147 B1).

Regarding claims 18, 20, Schmidt *et al.* and Kuwabara *et al.* discussed all the features as above. Schmidt *et al.* and Kuwabara *et al.* do not expressly teach wherein the cationic or amphoteric aqueous treatment composition used in process step (a), the ratio of amine units (comprise from 0.5 to 0.8 part of dimethylaminopropylamine and from 0.2 to 0.5 part of benzylamine) to epichlorohydrin units being from 0.8:1.2 to 1.2:0.8.

However, Ohno *et al.* teach polyamine modified compound, including: reaction products of the following (a)-(c): a) aliphatic polyamine (Col. 4, lines 62-64) such as dimethylamino propylamine (Col. 4, line 64), b) a cyclic amine or aromatic polyamine which has at least one NH₂ or NH group (Col. 5, lines 2-4) such as benzylamine (Col. 5, line 11) and reaction products of said aliphatic polyamine (a), said amine (b) and epoxide compound (d) which includes glycidyl ether obtained by reaction of epichlorohydrin with polyhydric phenol (Col. 5, lines 25-28) wherein (a)=1 mole; (b)=0.5-5 moles; and (NH₂ and/or NH contained in (a) and (b))/(epoxy group contained in (d)) is equal to 1/0.3-0.9 (Col. 5, lines 50-52). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the process for dyeing leathers by Schmidt *et al.* in view of applying the composition materials onto the leather by various methods by Kuwabara *et al.* so as to include epichlorohydrinamine polymer as taught by Ohno *et al.* *et al.* with reasonable expectation that would result in manufacturing

Art Unit: 1796

various molecular weight ranges polymer by the selection of different catalysts and the use of cross linking reagents, since the reaction between the amines and monoepoxides is usually effected merely by brining the components together in proper proportions. It is held that a particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided a process for dyeing leathers by Schmidt *et al.* in view of applying the composition materials onto the leather by various methods by Kuwabara *et al.* with epichlorohydrinamine polymer as taught by Ohno *et al.* *et al.* in order to manufacture various molecular weight ranges polymer by the selection of different catalysts and the use of cross linking reagents, since the reaction between the amines and monoepoxides is usually effected merely by brining the components together in proper proportions as taught by Ohno *et al.* (Col. 5, lines 50-52).

8. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt *et al.* (Pat. No. US 4,775,385) in view of Kuwabara *et al.* (Pat. No. US 5,676,707) as applied to claim 13, 14 and 24 above, and further in view of Natoli *et al.* (Pat. No. US 5,709,714).

Regarding claim 26, Schmidt *et al.* and Kuwabara *et al.* discussed all the features as above. Schmidt *et al.* and Kuwabara *et al.* do not expressly teach wherein the cationic or amphoteric aqueous treatment composition used in process step (a) is applied only to the crust surface of the leather.

Art Unit: 1796

However, Natoli *et al.* teach a method of treating a tanned leather stock (Col. 15, line 58) wherein retanning said tanned leather stock with particles of an amphoteric polymer dispersed in an aqueous medium to produce a retanned leather stock having improved color expression characteristic (Col. 15, lines 59-62). After retanning or, if desired, during retanning, the hide is colored with colorants, such as, acid dyes, mordant dyes, direct dyes, metalized dyes, soluble sulfur dyes, and cationic dyes. Colorants include natural pigments and synthetic dyes that are used to achieve the required color in both the cross section and the surface of crust leather before the finishing step (Col. 2, lines 22-32). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the process for dyeing leathers by Schmidt *et al.* in view of applying the composition materials onto the leather by various methods by Kuwabara *et al.* so as to include the required color in both the cross section and the surface of crust leather before the finishing step as taught by Natoli *et al.* with reasonable expectation that would result in producing a retanned leather stock having improved color expression characteristic as taught by Natoli *et al.* (Col. 1, lines 60-64).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided a process for dyeing leathers by Schmidt *et al.* in view of applying the composition materials onto the leather by various methods by Kuwabara *et al.* with the required color in both the cross section and the surface of crust leather before the finishing step as taught by Natoli *et al.* in order to produce a retanned leather stock having improved color expression characteristic.

Art Unit: 1796

Response to Arguments

9. Applicant's arguments filed on August 20, 2009 have been fully considered but they are not persuasive.

In response to applicant's argument that Schmidt *et al.* do not disclose step (b) of the process according to the recited claim 13, treating the leather with an anionic leather treatment composition in a drum.

The Examiner respectfully disagrees. Schmidt *et al.* teach in Example 6 (Col. 8, lines 10-20) that cationic chrome-tanned wet-blue leather shaved to 1.8 mm is tumbled for 1 hour with 300% of water at 45° C and 5% of a commercially available 35% strength aqueous solution of polyacrylate having a Fikentscher K value of 23 in a tanning drum and, in the course of the treatment, is anionically recharged (read on anionic treatment) analogously to retanning. The liquor was discharged, and then the anionically after-treated leather had added to it a wash liquor of 200% water at 60° C and is tumbled for 10 minutes.

In response to applicant's argument that Buckman *et al.* is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Buckman *et al.* teach cationic, water-soluble, amine-epichlorohydrin polymer compositions and to the uses of these polymers in the pulp and paper industry to improve drainage, provide retention of fiber fines (i.e. field of endeavor), dyes, pigments, fillers, starch, and gum and increase strength. In addition, said polymers are useful as resins in the manufacture of electroconductive paper and the sizing of

Art Unit: 1796

paper and paperboard as well as the separation of minerals in ore processing operations (Col. 1, lines 7-12), wherein the reaction products involving polymeric precursor and mono-tertiary amines may be as low as 500 whereas the polymers made with di-tertiary amines may have molecular weights as high as 50,000 to 500,000 (Col. 5, lines 42-46). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the process for dyeing leathers by Schmidt *et al.* in view of applying the composition materials onto the leather by various methods by Kuwabara *et al.* so as to include epichlorohydrinamine polymer as taught by Buckman *et al.* with reasonable expectation that would result in manufacturing various molecular weight ranges polymer by the selection of different catalysts and the use of cross-linking reagents and further to provide novel cationic water-soluble, amine-epichlorohydrin polymers as compare to polyethylenimines which requires the use of the very toxic monomer ethylenimine which, in recent years, has been described as a carcinogen, and severe restrictions have been placed on the handling of the monomer in commercial and industrial plants by government regulatory agencies.

In response to applicant's arguments against the references (i.e. Natoli *et al.*, or Ohno *et al.*) individually one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the process for dyeing leathers by Schmidt *et al.* in view of applying the composition materials onto the leather by various methods by Kuwabara *et al.* so as to include the required color in both the cross section and the surface of crust leather before the finishing step as taught by Natoli *et al.* with reasonable expectation that would result in producing a retanned

Art Unit: 1796

leather stock having improved color expression characteristic. Moreover, at the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the process for dyeing leathers by Schmidt *et al.* in view of applying the composition materials onto the leather by various methods by Kuwabara *et al.* so as to include epichlorohydrinamine polymer as taught by Ohno *et al.* *et al.* with reasonable expectation that would result in manufacturing various molecular weight ranges polymer by the selection of different catalysts and the use of cross linking reagents, since the reaction between the amines and monoepoxides is usually effected merely by brining the components together in proper proportions.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Schmidt *et al.* do not expressly teach applying the composition to leather by roll coating and/or roll application and/or spray application. However, Kuwabara *et al.* teach applying water-soluble resin materials onto the leather by various methods such as a method in which any of the materials formed into an aqueous solution is sprayed by means of a spray gun, coated by means of a bar coater, a roll coater an applicator, a doctor blade or the like, or applied by screen printing, and a method in which any of the materials formed into a film is contact bonded (Col. 5, lines 54-61). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the process for dyeing leathers by Schmidt *et al.*

Art Unit: 1796

so as to include applying the composition materials onto the leather by various methods as taught by Kuwabara *et al.* with reasonable expectation that would result in providing decrease in viscosity or in surface tension of soluble resin to achieve easier penetration and further to produce a uniform piece of leather (i.e. retanning) for improvements to the fullness of the leather, the tightness and smoothness of the grain, the break, the levelness and intensity of the dye shade, better uniformity in temper or flexibility, better wettability and additional stability against water and perspiration.

10. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Examiner Information

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bijan Ahvazi, Ph.D. whose telephone number is (571)270-3449. The examiner can normally be reached on M-F 8:0-5:0. (Off every other Friday).

Art Unit: 1796

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BA/
Bijan Ahvazi,
Examiner
Art Unit 1796

/Harold Y Pyon/
Supervisory Patent Examiner, Art Unit 1796

11/13/2009